

Modbus Register
Polymetron 9523 Calculated pH -
Cationic Conductivity Analyzer

V 2.02

Polymetron 9523 Calculated pH - Cationic Conductivity Analyzer V 2.02

| Name | Register | Data Type | Length | Access Mode | Discrete Range | Min / Max | Description |
|-----------------------|----------|---------------------|--------|-------------|-------------------|-----------|--------------------------|
| COND | 40001 | Float | 2 | R | | | |
| TEMP C | 40003 | Float | 2 | R | C | | |
| RESIST | 40005 | Float | 2 | R | RES MEAS UNITS | | |
| TDS | 40007 | Float | 2 | R | TDS UNITS | | |
| SALINITY | 40009 | Float | 2 | R | SALN MEASUNITS | | |
| MEASURE | 40011 | Unsigned Integer | 1 | R | | | |
| PTUSERVAL | 40012 | Unsigned Integer | 1 | R | | | |
| SELECT SPAN | 40013 | Unsigned Integer | 1 | R | | | |
| HTRY RESIST | 40014 | Float | 2 | R | HTRY RES UNITS | | |
| HTRY ACTUAL RES | 40016 | Float | 2 | R | HTRY RES UNITS | | |
| HTRY COND | 40018 | Float | 2 | R | HTY COND UNITS | | |
| HTRY ACTUAL CO | 40020 | Float | 2 | R | HTY COND UNITS | | |
| HTRY TDS | 40022 | Float | 2 | R | HTRY TDS UNITS | | |
| HTRY ACTUAL TDS | 40024 | Float | 2 | R | HTRY TDS UNITS | | |
| HTRY SAL | 40026 | Float | 2 | R | HTRY SAL UNITS | | |
| HTRY ACTUAL SAL | 40028 | Float | 2 | R | HTRY SAL UNITS | | |
| HTRY ACTUAL TEMP | 40030 | Float | 2 | R | C | | |
| RESUME READING | 40032 | Unsigned Integer | 1 | R/W | | | 0/1/2/3/4/5/6/7/8/9/10 |
| TEMP | 40033 | Unsigned Integer | 1 | R | TEMP UNITS | | |
| TEMP F | 40034 | Float | 2 | R | F | | |
| CELL K MIN | 40036 | Float | 2 | R | | | |
| CELL K MAX | 40038 | Float | 2 | R | | | |
| TEMP OFFSET | 40040 | Float | 2 | R | | | |
| TEMP SLOPE | 40042 | Float | 2 | R | | | |
| CONDUCTIVITY UNITS | 40044 | Unsigned Integer | 1 | R/W | | | U50/51/59/58/34 |
| COND UNITS I | 40045 | Unsigned Integer | 1 | R/W | | | U50/51/59/58/34 |
| RES MEAS UNITS | 40046 | Unsigned Integer | 1 | R/W | | | U155/156/169/171/170/172 |
| RES UNITS I | 40047 | Unsigned Integer | 1 | R/W | | | U155/156/169/171/170/172 |
| TDS UNITS | 40048 | Unsigned Integer | 1 | R/W | | | U2/38 |
| TDS UNIT | 40049 | Unsigned Integer | 1 | R/W | | | U2/38 |
| SALN MEASUNITS | 40050 | Unsigned Integer | 1 | R/W | | | U31 |

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| MEAS UNITS | 40051 | Unsigned Integer | 1 | R | | | |
| HTY COND UNITS | 40052 | Unsigned Integer | 1 | R | | | U50/51/59/58/34 |
| HTRY RES UNITS | 40053 | Unsigned Integer | 1 | R | | | U155/156/169/171/170/172 |
| HTRY TDS UNITS | 40054 | Unsigned Integer | 1 | R | | | U2/38 |
| HTRY SAL UNITS | 40055 | Unsigned Integer | 1 | R | | | U31 |
| TEMP UNITS | 40056 | Unsigned Integer | 1 | R/W | | | U25/26 |
| HTRY T UNITS | 40057 | Unsigned Integer | 1 | R | | | U25/26 |
| SET PARAMETER | 40058 | Unsigned Integer | 1 | R/W | | | 0/1/2/3 |
| DISPLAY FORMAT | 40059 | Unsigned Integer | 1 | R/W | | | 0/1/2/3/4 |
| TAG FORMAT | 40060 | Unsigned Integer | 2 | R | | | |
| HTRY TAG | 40062 | Unsigned Integer | 2 | R | | | |
| FILTER | 40064 | Unsigned Integer | 1 | R/W | s | | |
| CONFIG TDS | 40065 | Unsigned Integer | 1 | R/W | | | 0/1 |
| SELECT FACTOR | 40066 | Float | 2 | R/W | ppm /uS | | |
| SELECT CELL K | 40068 | Unsigned Integer | 1 | R/W | | | 5/6/7 |
| CELL CONSTANT | 40069 | Float | 2 | R/W | | | |
| CELL CONST | 40071 | Float | 2 | R | | | |
| CELL VAL | 40073 | Float | 2 | R | | | |
| T COMP TYPE | 40075 | Unsigned Integer | 1 | R/W | | | 0/1/2/3/4/5/6/7/8/9 |
| TCOMP-TDS | 40076 | Unsigned Integer | 1 | R/W | | | 0/1/2/3 |
| T COMP SLOPE | 40077 | Float | 2 | R/W | % /C | | |
| TCOMP REF TEMP | 40079 | Float | 2 | R/W | C | | |
| TEMP ELEMENT | 40081 | Unsigned Integer | 1 | R/W | | | 0/1/4 |
| SET MANUAL | 40082 | Unsigned Integer | 1 | R | TEMP UNITS | | |
| USER TEMP | 40083 | Float | 2 | R/W | C | | |
| USER TEMP F | 40085 | Float | 2 | R/W | F | | |
| OUTPUT MODE | 40087 | Unsigned Integer | 1 | R/W | | | 0/1/2 |
| EDIT VALUE | 40088 | Unsigned Integer | 1 | R | | | |
| 1PT COND | 40089 | Float | 2 | R/W | | | |
| 1PT RES | 40091 | Float | 2 | R/W | RES MEAS UNITS | | |

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| 1PT TDS | 40093 | Float | 2 | R/W | TDS UNITS | | |
| 1PT SALINITY | 40095 | Float | 2 | R/W | SALN MEASUNITS | | |
| NAME | 40097 | String | 8 | R/W | | | |
| SOFT VERSION | 40105 | Float | 2 | R | | | |
| SERIAL NUMBER | 40107 | String | 8 | R/W | | | |
| BOOTLOADER VERS | 40115 | Float | 2 | R | | | |
| FUNCTION CODE | 40117 | Unsigned Integer | 1 | R/W | | | |
| NEXT STATE | 40118 | Unsigned Integer | 1 | R | | | |
| SENS INTERVAL | 40119 | Unsigned Integer | 1 | R/W | | | 0/1/2/3/4/5/6/7/8 |
| CAL LEAVE | 40120 | Unsigned Integer | 1 | R/W | | | 0/1/2 |
| SPAN K 0.05 | 40121 | Unsigned Integer | 1 | R/W | | | 0/1/2 |
| SPAN K 0,5 | 40122 | Unsigned Integer | 1 | R/W | | | 1/2/3 |
| SPAN K 1 | 40123 | Unsigned Integer | 1 | R/W | | | 5/6/7 |
| SPAN K 5 | 40124 | Unsigned Integer | 1 | R/W | | | 2/3/4 |
| SPAN K 10 | 40125 | Unsigned Integer | 1 | R/W | | | 7/8/9 |
| CAL CELL K | 40126 | Float | 2 | R | | | |
| X | 40128 | Float | 2 | R/W | TEMP UNITS | | |
| P2 | 40130 | Unsigned Integer | 1 | R/W | TEMP UNITS | | 0/1 |
| P3 | 40131 | Unsigned Integer | 1 | R/W | TEMP UNITS | | 0/1/2 |
| P5 | 40132 | Unsigned Integer | 1 | R/W | TEMP UNITS | | 0/1/2/3/4 |
| P4 | 40133 | Unsigned Integer | 1 | R/W | TEMP UNITS | | 0/1/2/3 |
| P6 | 40134 | Unsigned Integer | 1 | R/W | TEMP UNITS | | 0/1/2/3/4/5 |
| P7 | 40135 | Unsigned Integer | 1 | R/W | TEMP UNITS | | 0/1/2/3/4/5/6 |
| P8 | 40136 | Unsigned Integer | 1 | R/W | TEMP UNITS | | 0/1/2/3/4/5/6/7 |
| P9 | 40137 | Unsigned Integer | 1 | R/W | TEMP UNITS | | 0/1/2/3/4/5/6/7/8 |
| P10 | 40138 | Unsigned Integer | 1 | R/W | TEMP UNITS | | 0/1/2/3/4/5/6/7/8/9 |
| Y | 40139 | Float | 2 | R/W | | | |
| SAVE TABLE | 40141 | Unsigned Integer | 1 | R/W | TEMP UNITS | | 0/1/2 |
| TABLE ACTION | 40142 | Unsigned Integer | 1 | R/W | | | 0/1/2 |
| R1CNTS | 40143 | Float | 2 | R | | | |
| R2CNTS | 40145 | Float | 2 | R | | | |
| R3CNTS | 40147 | Float | 2 | R | | | |
| R4 CNTS | 40149 | Float | 2 | R | | | |
| DRIVER VERS | 40151 | Unsigned Integer | 1 | R | | | |

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| Name | Register | Data Type | Length | Access Mode | Discrete Range | Min / Max | Description |
|----------------|----------|------------------|--------|-------------|----------------|-----------|------------------------------------|
| CAL REMINDER | 40152 | Unsigned Integer | 1 | R/W | | | 0/1/2/3/4/5/6/7/8/9 |
| OP ID | 40153 | Unsigned Integer | 1 | R/W | | | 0/1 |
| MIN MEAS VALUE | 40154 | Float | 2 | R | | | |
| MINIMUM | 40156 | Float | 2 | R | | | |
| MAXIMUM | 40158 | Float | 2 | R | | | |
| MAX MEAS VALUE | 40160 | Float | 2 | R | | | |
| CAL DATE | 40162 | Time2 | 2 | R | | | |
| TIME | 40164 | Time2 | 2 | R | | | |
| CAL STATUS | 40166 | Unsigned Integer | 1 | R | | | 0/1 |
| CAL TYPE | 40167 | Unsigned Integer | 1 | R | | | 19/7/5/6/15/3/17/18 |
| OP ID | 40168 | String | 2 | R/W | | | |
| MESSAGES | 40170 | Unsigned Integer | 1 | R | | | 0/1/2/3/4/5/6/7/8/9/10/11/12/13/14 |
| CAL DAYS | 40171 | Unsigned Integer | 1 | R | Day | | |
| SENSOR DAYS | 40172 | Unsigned Integer | 1 | R | Day | | |
| CARD SERIAL NO | 40173 | String | 6 | R | | | |
| SIGNALS | 40179 | Float | 2 | R | | | |
| LOG FLOAT | 40181 | Float | 2 | R | | | |
| LOG TEXT | 40183 | String | 8 | R | | | |
| LOG INT | 40191 | Integer | 1 | R | | | |
| LOG PARAM | 40192 | String | 8 | R | | | |
| DATE 1 | 40200 | Time2 | 2 | R | | | |
| DATE 2 | 40202 | Time2 | 2 | R | | | |
| DATE 3 | 40204 | Time2 | 2 | R | | | |
| DATE 4 | 40206 | Time2 | 2 | R | | | |
| DATE 5 | 40208 | Time2 | 2 | R | | | |
| DATE 6 | 40210 | Time2 | 2 | R | | | |
| TIME 1 | 40212 | Time2 | 2 | R | | | |
| TIME 2 | 40214 | Time2 | 2 | R | | | |
| TIME 3 | 40216 | Time2 | 2 | R | | | |
| TIME 4 | 40218 | Time2 | 2 | R | | | |
| TIME 5 | 40220 | Time2 | 2 | R | | | |
| TIME 6 | 40222 | Time2 | 2 | R | | | |
| PAGE NO: | 40224 | Unsigned Integer | 1 | R | | | |
| HIDDEN LINE | 40225 | Unsigned Integer | 1 | R | | | |
| HIGHLIGHT LINE | 40226 | Unsigned Integer | 1 | R | | | |
| SENSE | 40227 | Float | 2 | R | mV | | |
| DRIVE | 40229 | Float | 2 | R | mV | | |
| OFFSET | 40231 | Float | 2 | R | mV | | |
| VALUE | 40233 | Float | 2 | R | | | |
| FACTORY CAL | 40235 | Unsigned Integer | 1 | R/W | | | 0/1/2/3/4/5/6 |
| FACTORY CAL RV | 40236 | Float | 2 | R/W | | | |

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| SELECT RANGE | 40238 | Unsigned Integer | 1 | R/W | | | |
| GAIN VALUE | 40239 | Unsigned Integer | 1 | R | | | |
| FACTORY CAL GAIN | 40240 | Float | 2 | R/W | | | |
| T-FACTOR | 40242 | Float | 2 | R/W | <Ohm> | | |
| CAL ZERO | 40244 | Float | 2 | R | | | |
| SET FACTOR | 40246 | Float | 2 | R/W | | | |
| SPAN | 40248 | Unsigned Integer | 1 | R/W | | | 0/1/2/3/4/5/6/7/8/9 |
| FACTORY CAL MODE | 40249 | Unsigned Integer | 1 | R/W | | | |
| TempElemLeakage CCO | 40250 | Float | 2 | R/W | | | |
| RawCondSignal CCO | 40252 | Float | 2 | R | µS | | |
| CondValue Int CCO | 40254 | Unsigned Integer | 2 | R | µS /cm | | |
| ResistValue Int CCO | 40256 | Unsigned Integer | 2 | R | <Ohm> | | |
| TDSValue Int CCO | 40258 | Unsigned Integer | 2 | R | ppm | | |
| SalinityValue Int CCO | 40260 | Unsigned Integer | 1 | R | ppt | | |
| TempDegCMeas Int CCO | 40261 | Integer | 1 | R | C | | |
| TempDegFMeas Int CCO | 40262 | Integer | 1 | R | F | | |
| NewSensor CCO | 40263 | Unsigned Integer | 1 | R/W | | | 1/0 |
| TempR1Value CCO | 40264 | Float | 2 | R/W | <Ohm> | | |
| TempR2Value | 40266 | Float | 2 | R/W | <Ohm> | | |
| TEMP CAL RAW | 40268 | Float | 2 | R | TEMP UNITS | | |
| TEMP CAL OFFSET | 40270 | Float | 2 | R/W | TEMP UNITS | | |
| TEMP CAL USER | 40272 | Float | 2 | R/W | TEMP UNITS | | |
| CableLengthUnits CCO | 40274 | Unsigned Integer | 1 | R/W | | | U79/81 |
| CABLE LENGTH | 40275 | Float | 2 | R/W | | | |
| DD CONTENT | 40277 | Unsigned Integer | 1 | R | | | |
| SENSOR MEASURE | 40278 | Float | 2 | R | mV | | |
| POL. VALUE | 40280 | Float | 2 | R | | | |
| CABLE RESISTANCE | 40282 | Float | 2 | R/W | <Ohm> /m | | |
| CABLE CAPACITANCE | 40284 | Float | 2 | R/W | pF /m | | |
| CABLE CAPACITY | 40286 | Float | 2 | R | nF | | |
| T-COMP-TYPE | 40289 | Unsigned Integer | 1 | R/W | | | 0/1/2/3/4 |
| T-COMP-UPW | 40290 | Unsigned Integer | 1 | R/W | | | 0/1/2/3 |
| T-COMP-USER | 40291 | Unsigned Integer | 1 | R/W | | | 0/1/2 |
| | 40292 | Float | 2 | R/W | k<Ohm> | | |
| | 40294 | Float | 2 | R/W | % | | |

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|-------------------------------|----------|------------------|--------|-------------|----------------|-----------|-------------|
| T-COMP-TYPE | 40296 | Unsigned Integer | 1 | R/W | | | 0/1/2 |
| | 40297 | Float | 2 | R | k<Ohm> | | |
| | 40299 | Float | 2 | R | % | | |
| | 40301 | Float | 2 | R | % | | |
| | 40303 | Float | 2 | R | % | | |
| | 40305 | Float | 2 | R | % | | |
| | 40307 | Float | 2 | R | % | | |
| | 40309 | Float | 2 | R | % | | |
| | 40311 | Float | 2 | R | % | | |
| CAL FACTOR | 40313 | Float | 2 | R | | | |
| CAL SLOPE | 40315 | Float | 2 | R | | | |
| Calibration Factor | 40317 | Float | 2 | R | | | |
| Calibration Slope | 40319 | Float | 2 | R | | | |
| HTRY TEMP OFFSET | 40321 | Float | 2 | R | TEMP UNITS | | |
| | 40358 | Float | 2 | R/W | % | | |
| 9526 SET PARAMETER | 40360 | Unsigned Integer | 1 | R/W | | | 0/3 |
| 9526TCompTypeParent CCO | 40361 | Unsigned Integer | 1 | R/W | | | 0/1/2/3 |
| | 40362 | Unsigned Integer | 1 | R/W | | | 0 |
| 9526TempElementType CCO | 40363 | Unsigned Integer | 1 | R/W | | | 0/1 |
| | 40364 | Float | 2 | R | | | |
| New Sensor Yes/No | 40374 | Float | 2 | R | | | |
| Cal Type for last calibration | 40376 | Float | 2 | R | | | |

ALL Sensors and Analyzer: Classified ERROR Word - Register 49930

Table 2 Error register

| Bit | Error | Description |
|-----|----------------------------------|---|
| 0 | Calibration error | Faulty calibration detected |
| 1 | Electronic settings error | Faulty electronic calibration/settings |
| 2 | Cleaning error | Error in cleaning cycle detected |
| 3 | Measuring module error | Error in measuring module detected |
| 4 | System initialization | Inconsistent settings detected, reset to factory settings |
| 5 | Hardware error | Faulty hardware detected |
| 6 | Internal communication error | Internal communication error detected |
| 7 | Humidity error | Excessive humidity detected |
| 8 | Excessive temperature | Excessive temperature detected |
| 9 | | |
| 10 | Sample feed warning | Error in sample feed detected |
| 11 | Questionable calibration warning | Accuracy of previous calibration inadequate |
| 12 | Questionable measurement warning | Accuracy of previous measurement inadequate/out of range |
| 13 | Safety warning | Safety equipment error detected |
| 14 | Reagent warning | Reagent warning, e.g. fill level < min detected |
| 15 | Service request warning | Service request detected |

ALL Sensors and Analyzer: Classified STATUS Word - Register 49931

Table 3 Status register

| Bit | Status 1 | Description |
|-----|---|--|
| 0 | Calibration activated | Calibration in progress, measurement value not up to date |
| 1 | Cleaning activated | Cleaning in progress, measurement value not up to date |
| 2 | Service mode activated | Device in "Service" mode, measurement value not up to date |
| 3 | General error message | General error detected, refer to error text for details |
| 4 | Measurement value channel 0, poor quality | Measurement accuracy is not within specified limits |
| 5 | Measurement value channel 0, range short-fall | Measurement value falls short of the specified range |
| 6 | Measurement value channel 0, range exceeded | Measurement value exceeds the specified range |
| 7 | Measurement value channel 1, poor quality | Measurement accuracy is not within specified limits |
| 8 | Measurement value channel 1, range short-fall | Measurement value falls short of the specified range |
| 9 | Measurement value channel 1, range exceeded | Measurement value exceeds the specified range |
| 10 | Measurement value channel 2, poor quality | Measurement accuracy is not within specified limits |
| 11 | Measurement value channel 2, range short-fall | Measurement value falls short of the specified range |
| 12 | Measurement value channel 2, range exceeded | Measurement value exceeds the specified range |
| 13 | Measurement value channel 3, poor quality | Measurement accuracy is not within specified limits |
| 14 | Measurement value channel 3, range short-fall | Measurement value falls short of the specified range |
| 15 | Measurement value channel 3, range exceeded | Measurement value exceeds the specified range |